

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

At page 16, please delete the paragraph beginning at line 22 and ending at page 17, line 16, and replace with the following:

As already noted, the system 10 preferably scans mailpieces electronically using an optical character reader or similar device in order to generate a single-scan image of the address and notification data 62, 72, 74 and capture the data electronically as the mailpiece makes a single pass along the path of travel 21 of the mailpiece transporter 20. With the data thus captured, software techniques as understood by those skilled in the art can easily segment the data so as to isolate for distinct processing purposes the receiver location address indicator 62 (see letter 60 of FIG. 7), sender return-address indicator 72, and any sender notification indicator 74. Having captured and segmented the data, the processor 16, for example, can utilize character comparison techniques to search for a match between the receiver location address indicators and receiver forwarding address indicators using a character image matching algorithm. The single scan image is used to generate a label that is then applied to a mailpiece. Thus, rather than processing in multiple steps requiring manual data entry, mailpieces are scanned, an image generated, and a label having the forwarding address indicator 84 (see letters 80, 90 of FIGS. 8-9) thereon is applied to the mailpiece so that each mailpiece is processed in one complete cycle of system 10 operation.

At page 19, please delete the paragraph beginning at line 28 and ending at page 20, line 19, and replace with the following:

If a successful match is obtained (Block 110), a label is applied to the mailpiece, and on it is printed a receiver forwarding address indicator 84 so that the mailpiece can be appropriately forwarded. Preferably, the system 10 will include as part of the labeler an ink jet printer 29 or other printing device as understood by those skilled in the art, having the capability to print at least three discrete lines simultaneously so as to permit the appropriate forwarding address indicator data 84 (see letter 80 of FIG. 90) to be printed on the label (Block 111) as the mailpiece travels once past the printer on the mailpiece transporter 20. If the match is not successful

(Block 110), then off-line extraction coding is performed (Block 112). Coupled with the ability to scan (Block 101), segment the single-scan image (Block 103), and determine a forwarding address match (Block 108), the system 10 allows the mailpiece to be completely processed on a single pass without the mailpiece leaving the path of travel 21 of the mailpiece transporter 20. This contrasts with conventional systems and methods which require manual keypunch entry of data in separate, additional processing steps, leading to higher costs and slower forward mail processing.

At page 20, please delete the paragraph beginning at line 20 and ending at page 21, line 12, and replace with the following:

If it is determined that there is no match (Block 108) because there is no forwarding order with address on file, or for any other reason such as an incorrect address or no such addressee at the address, then the mailpiece is processed (Block 113) as not having a forwarding address on file and a determination is made whether the mailpiece is to be processed for a return to sender (Block 114). If so, the mailpiece is then submitted for return-to-sender (RTS) processing (Block 115). Preferably, as part of RTS processing, the mailpiece is labeled below the sender return address indicator with an indicator such as a barcode 75 corresponding to the receiver location address indicator. The mailpiece is also labeled above the sender return address indicator with a barcode corresponding to the sender return address indicator 72. In accordance with this specific embodiment of the present invention, the mailpiece can be returned to a mailcarrier to attempt a second-time delivery of the mailpiece. If delivery is again unsuccessful, the mailcarrier simply marks out the bottom barcode and the mailpiece is returned for subsequent RTS processing, as described below. If the mailpiece is not to be processed for RTS, then the IA-TAG is printed on the label (Block 116), and then sorted to a pending stacker (STKR).

At page 21, please delete the paragraph beginning at line 13 and ending at page 22, line 14, and replace with the following:

FIG. 2 illustrates RTS processing, describing the method steps 200 of the present invention that also can be implemented by the system 10 for handling mailpieces to be returned to sender. These method steps can be carried out as a continuing part of the forward mail

processing 100 as substantially described above or as an independent processing operation. The initial step of the procedure 200 is to individually scan each of a plurality of mailpieces so as to generate a single-scan image (Block 201) of address indicators. The single scan image is segmented into address blocks (Block 202) and the ABAs identified (Block 207) and matched (Block 208). The address block is compared (Block 203), preferably using an OCR engine (Block 204) and a ZIP + 4 lookup table (Block 205), to determine a match between the address block indicator such as the USPS's "ZIP + 4" and the ABA (Block 206). If a match is obtained (Block 209), a label will be applied to the mailpiece, as already described, on which will be printed the sender return address indicator along with an indicator of the reason for returning the mailpiece to the sender (Block 210). The mailcarrier will have originally determined the reason for non-delivery, which can be independently indicated (Block 211). With the procedure 200, mailpieces can be processed as a batch having all mailpieces to be returned for the same reason. In addition, however, the system 10 and method 200 permit storage of address indicators specifying for each mailpiece addressed to a specific addressee the reason for return. In any event, the system 10 and method 200 will label the mailpiece and print the sender return address indicator and reason for return as described above (Block 210).

At page 22, please delete the paragraph beginning at line 15 and ending at page 23, line 2, and replace with the following:

FIG. 2 further illustrates that for any mailpiece for which a sender return address indicator 72 is not found in the single-scan image of the front side of the mailpiece, the opposing side of the mailpiece will also have been scanned in order to image any address indicator positioned there (Block 213). If the sender return address indicator 72 is found on the reverse side of the mailpiece, the processing proceeds as already described and culminates in the mailpiece being labeled and the appropriate address indicator and reason for return printed thereon (Block 212). If no address indicator is found on either side of the mailpiece, (Block 214) the mailpiece is nonetheless tagged or labeled (Block 215). An identifying code indicator, preferably a barcode, is printed on the tagged or labeled mailpiece (Block 216) for use in subsequent processing, and the mailpiece is sorted for subsequent processing.

At page 23, please delete the paragraph beginning at line 3 and ending at line 26, and replace with the following:

FIG. 3 illustrates the subsequent RTS second pass processing procedure 300. The procedure 300 is preferably implemented on a system utilizing a processor 16 that is a programmable computer which can be programmed for additional RTS processing. This permits the system 10 as described above to implement the steps 300 utilizing the same system devices. More specifically, the process controller is placed in rerun RTS mode (Block 301). The identifying code indicators applied to each mailpiece during the preceding RTS processing are scanned (Block 302). The scanned image is compared with a set of images stored in a database to determine whether a corresponding address and reason for no deliver at such address (Block 303). If so (Block 304), a label is applied to the mailpiece and on the label is printed a return to sender address indicator 76 (see letter 70 of FIG. 8) along with the reason for return as determined by the comparison with the database images. If no match is made (Block 304), the mailpiece is sorted to a reject stacker for additional processing or disposal (Block 306). If the entire plurality of mailpieces has been processed (Block 307), then the procedure concludes with an end report being generated (Block 308).

At page 27, please delete the paragraph beginning at line 29 and ending at page 28, line 26, and replace with the following:

FIG. 5 illustrates the corresponding steps 30 for processing off-line those mailpieces flagged for subsequent processing, according to the procedures described above. These will be images of address indicators for mailpieces which were to be forwarded and the sender notified, but for which no return address was obtained. Initially, the single-scan images generated in earlier processing are again sorted (Block 501) and presented, preferably to a keyboard operator at a video display terminal, each in succession (Block 502). If the image is a repeat of an earlier one presented in the succession of images (Block 503), the operator assigns the preceding return address (Block 504); otherwise the operator attempts to identify on the image a corresponding sender return address indicator, in which case the operator preferably will be able to "point and click" on the indicator (Block 505) and the OCR and ZIP + 4 hookup are performed (Block 506), as that procedure is understood by those familiar with the relevant art. If the indicator

corresponds to a correct sender return address indicator (Block 507), the operator will proceed to the next image if any remain for processing (Block 508). Alternatively, if no correct identification is made, the operator will manually input address information for search using an extraction algorithm (Block 509) against a corresponding list of address indicators, such as the USPS "ZIP + 4" (Block 510). Once the last image is processed (Block 508), then off-line processing is ended and reports can be produced (Block 511).

At page 30, please delete the paragraph beginning at line 14 and ending at page 31, line 9, and replace with the following:

Once all scanned images have thus been processed (Block 610), the images are sorted (Block 611), preferably by arranging the header in accordance with the image indicator. Those images for which no return address has been identified through an initial match and which have been marked for subsequent processing, are pulled (Block 612) and sorted according to pattern criteria. They are then displayed in succession to an operator, preferably positioned at a keyboard and video display terminal. For each image thus displayed, the operator will provide a shortened extraction code (Block 613) representing the publication name, which is then compared against an existing database of publication names and addresses (Block 614). Because the images have already been sorted according to pattern criteria, the operator can simply use a repeat key for subsequent identically patterned images once a determination has been made. When a match is made (Block 615), the image will be flagged with the corresponding address and put in the printing buffer. Otherwise, the operator must pull the magazine based on the image number printed on the front, find the publication address (Block 616) and input the address where it will be included in the database of publication names and addresses (Block 617). The mailpiece then will be included in the printing buffer if image keying is done (Blocks 621, 622).

At page 31 please delete the paragraph beginning at line 10 and ending at page 32, line 2, and replace with the following:

After an address indicator has been determined for each image, a printing procedure commences. Mailpieces are sorted according to the destination address and volume of multiple images. The mailpiece is printed within a "postage due" frame 92 that includes a sender return address indicator and other indicator, preferably a postnet or planet barcode 94, corresponding to the sender's address (Block 618) (see FIG. 10). Multiple images being sent to the same address will print at the end with a cover sheet indicating the total postage due, the publication address, and any corresponding postnet or planet barcode (Block 619). All the images and corresponding cover sheets are folded and either tabbed or stapled closed before sending to the publisher or other multi-page mailpiece sender. Thus, 3579 processing 600 according to the present invention represents a significant advance over conventional 3579 processing, such as carried out by the USPS, in which publisher addresses are continually looked up manually and cover pages are separated and individually placed in envelopes to be addressed to the respective magazine publishers.

At page 38 please delete the paragraph beginning at line 9 and ending at page 39, line 24, and replace with the following:

FIG. 12 perhaps best illustrates an apparatus according to the present invention for performing each of the above-described mail handling procedures 100, 200, 300, 400, 500, 600, the apparatus preferably including a mailpiece transporter 20, which includes: a mailpiece conveyor 22 to convey each of a plurality of mailpieces along a predetermined path of travel 21; a mailpiece receiver 50 positioned upstream from the mailpiece conveyor 22 at the initial point of the path of travel 21 to receive each mailpiece for subsequent conveyance along the preselected path of travel 21; and a mailpiece dispenser 51 positioned downstream at the terminal point of the path of travel to dispense each mailpiece. The apparatus preferably includes, as well, a scanner 25, preferably an optical character reader to read data positioned on each mailpiece and generate an image of the address data. The apparatus further includes a labeler 28, such as an input-output processor and inkjet printer 29, positioned along the path of travel 21 of the mailpiece transporter 20 downstream from the labeler 28 for labeling each of the plurality of

mailpieces with a preselected routing indicator. The apparatus includes a control processor 16, preferably a programmable computer 52, in communication with the scanner 25 and labeler 28 to receive single-scan images from the scanner 25, separate each image into discrete data groups having at least address indicators 62, 72, 84 and instruct the labeler 28 to label each of the plurality of mailpieces with the preselected routing indicator. The process controller is programmed, preferably using software procedures as well understood in the art and responsive to the location address indication data group, to determine when the receiver address of a corresponding mailpiece corresponds to one of a list of forwarding addresses forming a forwarding address database stored on the processor 16 or on a separate medium in communication with the processor 16 and to instruct the labeler 28 to label the mailpiece with the listed forwarding receiver address 84. The processor similarly is programmed to determine for mailpieces to be returned to a sender the reason why. Accordingly the processor is programmed to instruct the labeler 28 to label the mailpiece with a corresponding sender return address indicator 74 along with a reason for return indicator.